National University of Computer and Emerging Sciences

Lab Manual

Computer Organization and Assembly Language



Lab 07

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| **Class** | CS3 |
| **Semester** | Fall 2022 |

Fast School of Computing

FAST-NU, Lahore, Pakistan

# Objectives

* Display Memory Formation
* Hello World in Assembly Language
* Screen Location Calculation

**Contents**

[Objectives 2](#_Toc116767957)

[ACTIVITY 1: 2](#_Toc116767958)

[ACTIVITY 2: 2](#_Toc116767959)

[ACTIVITY 3: 2](#_Toc116767960)

[REFERENCES 2](#_Toc116767961)

**Note for all questions**: You can make as many memory variables, subroutines as you need. Must read all the manual before starting.

## ACTIVITY 1:

Write a program to print three different messages on the three different locations on the screen**.**

Play with changing background color, foreground color and blinking foreground.

## ACTIVITY 2:

Write a function **drawrect** that takes four parameters via the stack. The parameters are top, left, bottom, and right in this order. The function should display a rectangle on the screen using the characters + - and |.

## ACTIVITY 3:

Practice the activities from Lab 1 through Lab 6, to prepare yourself well for a Comprehensive Midterm of COAL Lab happening at 10th week (from 24th to 28th October).

## REFERENCES

* http://www.dosbox.com/download.php?main=1
* <http://sourceforge.net/projects/nasm>
* <http://www.nasm.us/>
* [http://www.programmersheaven.com/download/21643/download.aspx (AFD)](http://www.programmersheaven.com/download/21643/download.aspx)